### BASIN, M.

Plant manufacturing nonstandard equipment for automatic transportation units. Avt.transp. 40 no.10:55-56 0 '62. (MIRA 15:11)

1. Direktor Bobruyskogo spetsial'nogo savoda nestandartnogo oborudovaniya.

(Bobruysk-Machinery industry)

BASTN, M.A.; YEOOROV, I.T.; ISAYEV, I.I.; KRAMAREV, Ye.A.; SADOVNIKOV, Yu.M. (Ieningrad)

"Some features of the use of gaseous media to change hydrodynamical characteristics of solids moving in a fluid"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 January - 5 February 1964

MOTYLEV, Yu.L., kand. tekhm. nauk; ZALESSKIY, Ye.P., prof.; KALYUZHNYY, I.S., kand. sel'khoz. nauk; AZIZOV, A.A., mlad. nauchnyy sotr.; POLETAYEV, A.V., kand. khim. nauk; ABRUTSKAYA, Ye.G., mlad. nauchnyy sotr. Prinimali uchastiye: BUTLITSKIY, Yu.V., mlad. nauchnyy sotr.; FENOSEYEVA, T.I., mlad. nauchnyy sotr.; BIRUL', A.K., prof., doktor t.khm. nauk, retsenzent; ZVERINSKIY, G.I., inzh., retsenzent; KOVALEV, T.G., inzh., retsenzent; BASIN, M.M., inzh., retsenzent; DEHERDEYEV, B.S., red.; DONSKAYA, G.D., tekhm. red.

[Stability of earth roadbed and road mats in regions with artificial irrigation] Ustoichivost' zemlianogo polotna i dorozhnykh odezki v raionakh iskusstvennogo oroshenia. [By] IU.L.Motylev i dr. Mosava, Nauchno-tekhn.izd-vo M-va avtorooil'nogo iransp.i shos. dorog RSFSR, 1961. 178 p. (MIRA 15:2)

(Urbekistan-Road construction) (Uzbekistan-Irrigation)

(MIRA 12:10)

NayGUZ, N.I.; RASIN, M.N.

New types of automatic control of hydraulic presses. Kuz.-shtam.

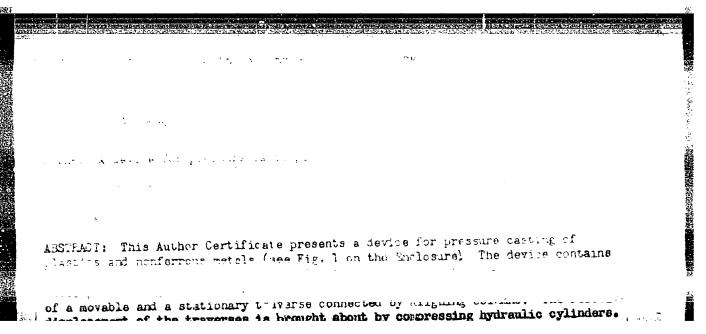
proisv. 1 no.3:28-32 My '59. (Power presses) (Automatic control)

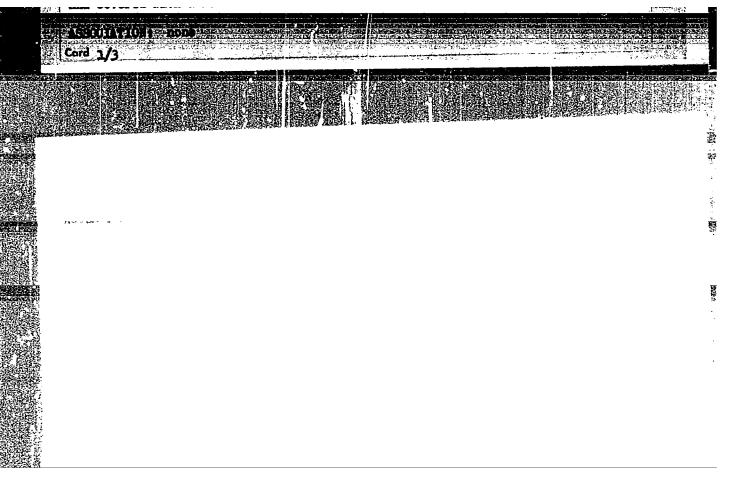
NAYGUZ,	N.I.; BASIN, M.N.	
	Hydraulic gag presses with a capacity of 800 tons. proizv. 6 no.1:40-42 Ja 64.	Kuzshtem. (MIRA 17:3)
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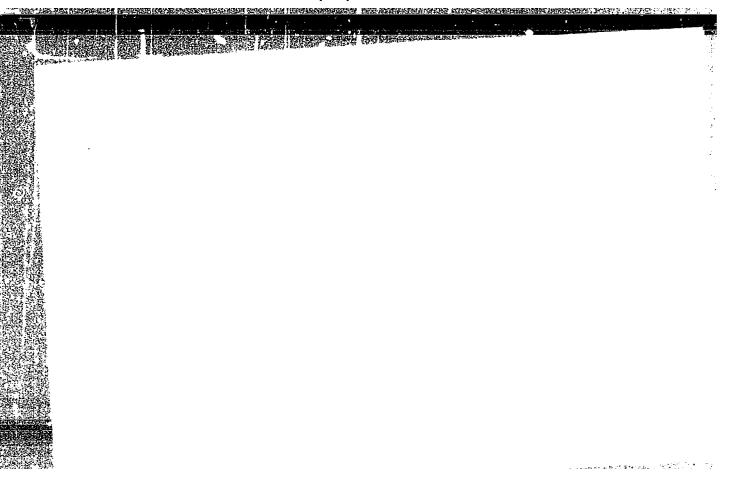
NAYGUZ, Natan Iosifovich; BASIN, Mikhail Natanovich; MOKROV, I.I., inmh., retsenzent; PILIPENKO, Yu.P., inzh., red.; GORNOSTAYPOL'SKAYA, M.S.; tekhn. red.

[Presses for cold briquetting of metal scrap] Pressy dlia kholodnogo briketirovaniia metallicheskoi struzhki. Moskva, Mashgiz, 1963. 94 p. (MIRA 16:6)

(Power presses) (Scrap metals)







28913 BASIN, M. O Massovom Ragvitii Sadovodstva Rabochikh i Sauzhamikh. Izadachi Lrofsoyuzovi. Prof. Soyuzy, 1949, No. 9, s,16-18.

SO: Letopis' Zhurnal'nykh Statey, Vol. 39, Moskva, 1949

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SO: Monthly List of Russian Accessions, Vol. 6, No. 2, May 1953

- 1. DASIN, M. J.
- 2. USSR (600)
- 4. Fruit Culture
- 7. Cooperative fruit growing by workers and administrative employees. Sad i og. no. 10, 1952.

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Vegetable Gardening

For a high yield in workers' and employees' gardens. V pom. profektivu. 14, No. 5, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. UNCLASSIFIED.

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Spravochnik Po Ogorodnichestvu (Manual of Vegetable Gardening, By) 1954
M. Basin (I) A. Tutsevich. 7 Izd., Dop. (Moskva) Profizdat, 1954.
199 P. Illus., Diagrs., Tables (V Pomoshch' Rabochim I Cluzhashchimogorodnikam)

BASIN, M.Z.; GUTSEVICH, A.Ya.

[Vegetable gardening manual] Spravochnik po ogorcdnichestvu. Isd.8., dop. [Moskva] Profisdat, 1956. 230 p. (MLRA 9:12) (Vegetable gardening)

BASIN, Mark Zalmanovich, ; GUTSEVICH, Aleksandr Yakovlevich; KUZHETSOVA, N.I., redaktor; KIRSANOVA, N.A., tekhnicheskiy redaktor.

[Vegetable gardening manual] Spravochnik no ogorodnichestvi. Izd. 9-oe. [Noskva] Izd-vo VTsSPB Profisdat, 1957. 252 p.
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BASIN, M.A.; ORFISHVICH, A.YA.

[Marmal of vegetable gardening] Spravochnik po ogorodniche stvu. Ind. 10, ispr. i dop. [Moskva] Profizdat, 1958. 300 p. (MIRA Il:10) (Vegetable gardening)

Gommunity orchards. Zdorov's 4 no.6:27 Je '58 (MIRA 11:6)

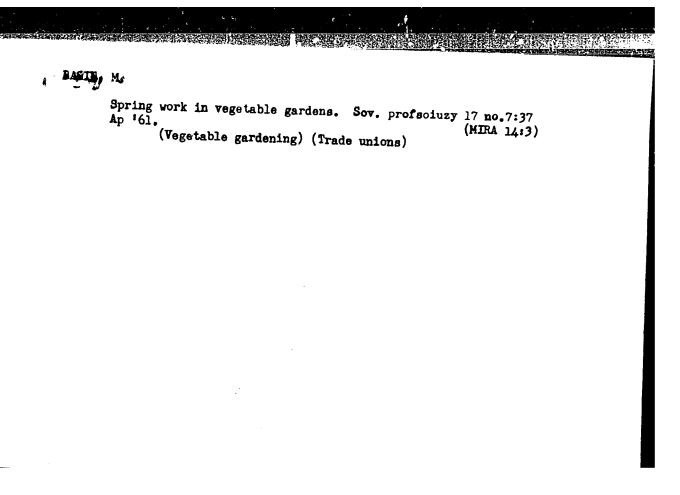
BASIN, M.

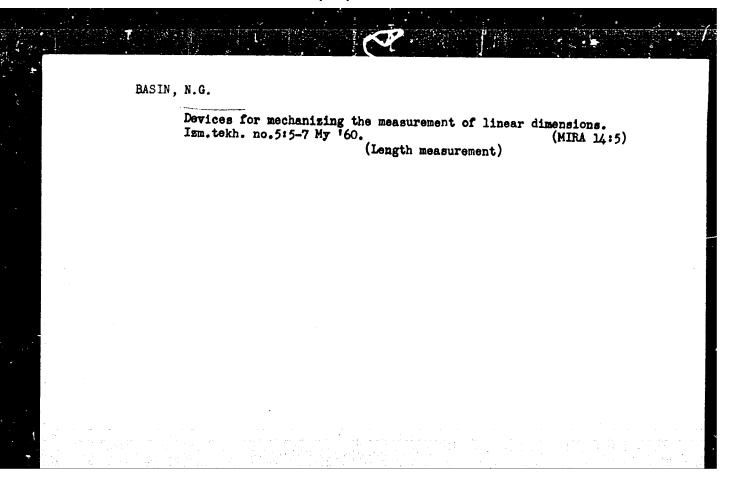
Inadequate manual ("The legal status of garden plot owners' associations of workers and employees" by I.F.Pokrovskii. Reviewed by N.Basin. Sov.profsoiusy 7 no.23:61-62 D '59.

(Contactor) ("The legal status of garden plot owners' by I.F.Pokrovskii. Reviewed by N.Basin. Sov.profsoiusy 7 no.23:61-62 D '59.

(Gardening) (Land temure)

(Pokrovskii, I.F.)





BASIN, S.; SYAZEV, V.; SMIRNOV, O.; SHUSTOV, A.

Organizing centralized intercity freight haulage by means of public automotive transportation. Avt. transp. 36 no. 6:4-9 Je '58.

(MIRA 11:7)

(Transportation, Automotive)

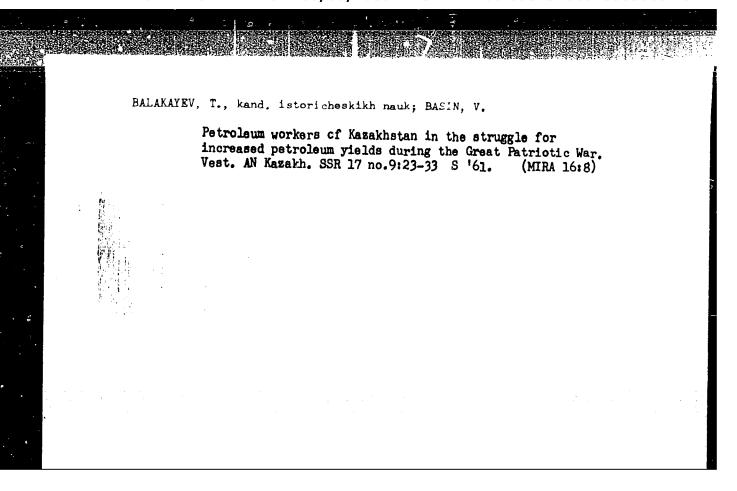
RASIN, S., kand, tekhn, nauk, lush,-polkevnik To aid the dissemination of information on military equipment ("Tank" by V.M. Selivokhin. Reviewed by S. Basin). Voen. vest. 39 no.10:88-89
0 159. (MIRA 13:2)

(MIRA 13:2)

(Tanks (Military soience)) (Selivokhin, V.M.)

"Amphibious track-laying and wheeled vehicles" by M.G.Red'kin.
Reviewed by S.Basin. Voen.vest. 39 no.8:88-89 Ag '60.

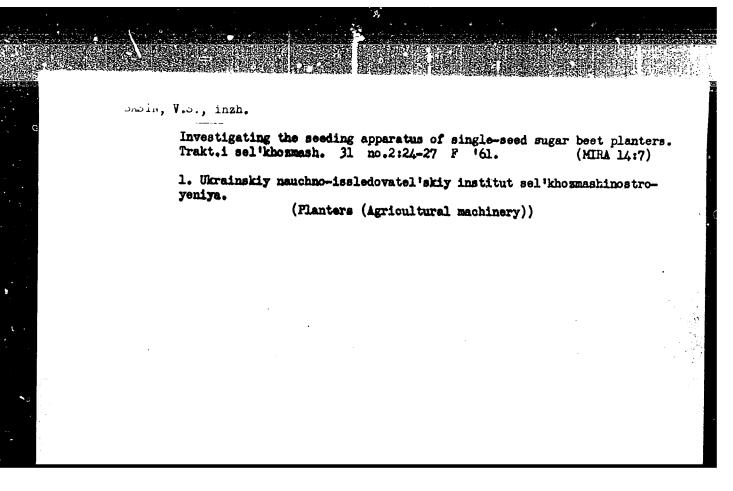
(Motor vehicles, Amphibious) (Red'kin, M.G.)



SPON-12 hill-drop planter for sugar beets. Trakt.i sel'khos-mash. no.8:27-29 Ag '59. (MIRA 12:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut sel'sko-khosyaystvennogo mashinostroyeniya (UkrHIISKhOM)

(Planters(Agricultural machinery))



BASIN, V.S., Inzh., FRAYEVCY, V.A., Inze.

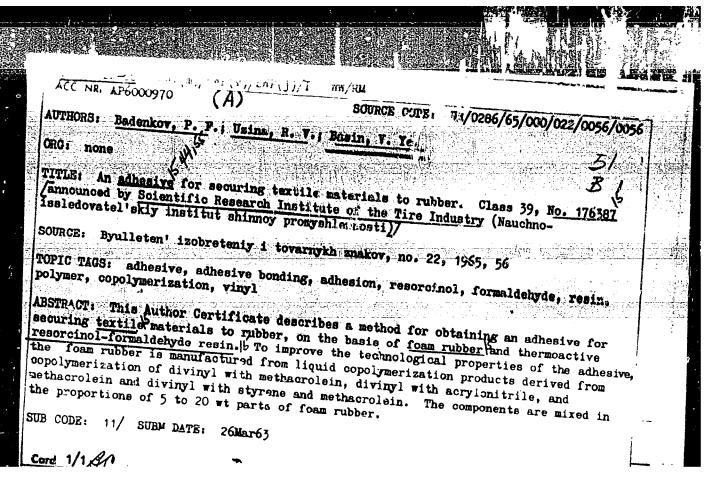
Use of roentgenography in studying the operating process of high precision planters. Trakt. i sel'khozmash. no.7:36-37 Jl '65. (MIRA 18:7)

1. Ukrainskiy nauchno-issledovatel'skiy institut sel'skokhozyaystvennogo mashinostroyeniya.

otv. red.; FALLTOVA, Z.N., red.

[Heavy industry of Kazakhstan in the Great Patriotic War; an historical study] Tiazhelaia promyshlennost Kazakhstana v Velikoi Otechestvennoi voine; istoricheskii ocherk. Alma-Ata, Nauka, 1965. 162 p.

(MIRA 18:7)



BASIN, V.Ye.

Improved mold for the "H" adhesion test. Kauch. i rez. 16 no.6: 36-37 Je '57. (MIRA 10:10)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.
(Rubber--Testing)

AUTHORS:

Uzina, R.v., Basin, v.Ye., Dostyan, M.S.

TITLE:

The Strength of the Bond Between Tyre Cord - Adhesive and Rubber (K voprosu o prochnosti svyazi sistemy

kord - adgeziv - rezina)

PERIODICAL:

Kauchuk i rezina, 1958, Nr 7, pp 13 - 18 (USSR)

ABSTRACT:

The authors consider that theories which regard the adhesion between plymers as being a function of intermolecular and chemical interaction satisfy experimental finding better than other theories.

The basic point of failure in the system, tyre cord adhesive - rubber is usually at the interface between

the adhesive and the rubber.

In order to increase the strength of bond at this point, it is essential to raise intermolecular action by incorporating substances with active functional groups which will bring about chemical bonds between the adhesive and

rubber.

The adhesive or material with which the cord is impregnated must have sufficient cohesiveness to withstand dynamic deformations, have high elastic modulus, high peel strength and good thermal resistance.

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The Strength of the Bond Between Tyre Cord - Auhesive and Rubber

The method of "luminescent analysis" (Ref 5) with ultra-violet light was used to study the boundaries at which failure occurs. Figure la shows characteristics of adhesive failure at the adhesive-rubber interface and Figure 1b of cohesive failure. Further studies were made of threads of the cord from yres which had failed under high magnification - Figure 2. The usual impregnating material for cord is non-polar (natural latex or divinyl-styrol), and does not increase adhesion between cord and rubber. Addition of polar substances to this, non-polar, latex increases adhesion. Figure 3 shows this gain in strength with up to 30% addition by weight of, Curve 1, resorcinal formaldehyde and, Curve 2, casein. Figure 4 shows the improvement with different percentages of (4a) carboxyl groups and (4b) vinylpiridine groups in the latex with different rubbers - the top curve being natural rubber, the middle SKB and the bottom SKS-ZOAM in each case. The addition of albumens or caseins in latex raises the intermolecular action with cellulose and the addition

Card2/4

The Strength of the Bond Petveen Tyre Cord - Adlesive and Ribber

of resorcinal formaldehyde increases chemical interaction - Figure 5a. Curves 1 for the latter and Curves 2 for casein. Figure 5b shows the result of similar additions on the strength of the bond to SKB rubber. Addition of resorcinalformaldehyde to latexes which already contain functional groups must be made with discretion and can, in some cases, decrease the bond strength through increased intermolecular action within the film of impregnant itself. Figure 6 illustrates this. The question of introduction of vulcanising agents into the cord impregnating material is considered. Data suggests that sulphur should not be added since it will migrate into the cord from the rubber in any case. Addition of sulphur to impregnants of latex-casein composition worsen the resistance to repeated compression, as shown in Addition of an accelerating agent DMASK to latex-casein or latex-resorcinal-formaldehyde impregnants improve this resistance - Table 2. Further work confirms the importance of good bonding between cord and rubber with field tests - Figure 7. Other figures show the influence of additions of resorcinal-

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50V/13 -58-7-4/19 The Strength of the Bond Botheen Tyre Cord - Achies ve and Rubber

> formaldenyde on the breaking stre th, modulus and proportional elongation of latex films and, similarly, for additions of carboxyl functional groups - Figures 8 and 9, respectively.

Finally, consideration is given to the nature of the adherents in relation to adhesion. A roughened cord surface improves adhesion. Channel black in the rubber composition is good and substances such as benzyl chloride, and benzotrichloride lead to stronger bonds through increased chemical reaction. The effect of small additions of the latter into the rubber composition is shown in Figures 10 and 11, the cord impregnant in this case being divinyl-2-metyl-5-vinylpiridine latex. 10 figures and 12 references, 9 of which are Soviet, 2 English and 1 German.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (Scientific Research Institute of the

Tyre Industry)

1. Tires--Design 2. Tires--Mechanical properties Card4/4

--Adhesion 4. Tires--Test results

Uzina, R.V. and Basin, V.Ya. AUTHORS:

SOV/138-58-11-5/14

TITLE:

Gas Permeability of Rubber-cord Material (Gazopronits-

ayemost' rezino-kordnykh sistem)

PERIODICAL: Kauchuk i Rezina, 1958, Nr 11, pp 18 - 21 (USSR)

ABSTRACT: Permeability of gas through a polymer film results from absorption into the film, diffusion through the film and description on the other side. Initially, the gas is fully absorbed into the film and there is no description. The rate of diffusion then gradually increases and finally attains a constant rate. The factors involved are strongly influenced by temperature and are related to the energy of activation of the material. Permeability tests were made using a Varburg apparatus, the diffusion chamber of which is shown in Figure 1.

diameter of the rubber-cord specimen is made the same as that of the perforated plate in the chamber, 103 mm, The rubber-cord specimen is surrounded by a ring of plain rubber which is vulcanised to the test specimen, as in Figure 2 and provides an edge seal of the same thickness as the specimen. In order to measure gas penetration along the cord, other specimens were prepared as in

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Gas Permeability of Rubber-cord Material SOV/138-58-11-5/14

Figure 3, where a thread of cord material is bonded between two rubber layers and protrudes through them at the ends of the thread. The permeability of the sample is determined by formula (1) from pressure difference in a manometer connected to the chamber below the sample which has area A and thickness d. The specific permeability Q = P/d for a sample of unit thickness is given in Eq (2), where P1 - P2 is the pressure difference by the manometer on conclusion of a test of duration H seconds at a temperature of T abs. Formula (3) gives the quantity of gas Q, penetrating along a thread or capillary of area S. Figures 4 and 5 plot quantity of nitrogen gas diffusing through natural rubber - viscose cord samples with the cord impregnated with various latex impregnating mixes, and also the quantity diffusing through plain film made from the same latex compositions. Quantity is plotted against pressure in Fagure 4 and against temperature in Figure 5. The fact that the impregnated cord samples and the latex film samples have similar curves, suggests that permeability is determined primarily by the rubber covering layers and Card2/4

Gas Permeability of Rubber-cord Material SOV/138-58-11-5/14

the layer of impregnating material. Table 1 shows the influence on permeability of various polar additives to films of latex compositions used for cord impregnation, Table 2 - the influence of various impregnating compositions on the permeability of natural rubber - viscose card specimens. Permeability is sharply reduced by addition of casein or resorcinal formaldehyde to the latex impregnant. Table 3 gives permeability of rubber-cord specimens with natural, natural plus butyl and of chloroprene rubbers in conjunction with cotton, viscose and with nylon cords in both impregnated and unimpregnated conditions. Chloroprene rubber shows very low permeability as sompared with natural rubber. The influence of the depth of impregnation into the cord fabric and into individual threads from the cord is shown in Table 4. Diffusion through the cord fabric in a direction perpendicular to the fabric is influenced little by depth of impregnation but permeation along the threads is strongly influenced by this factor. In the event of a puncture or damage to the tyre, causing the ends of the cord threads to

Card3/4

Gas Permeability of Rubber-cord Material

SOV/138-58-11-5/14

be exposed, permeation along the threads could be considerable if they are not deeply impregnated. Table 5 shows the quantity of gas permeating along the threads of rubber-cord samples made up with cords of cotton, of viscose and of nylon material in both impregnated and unimpregnated condition. There are 5 figures, 5 tables and 13 references, 7 of which are Soviet, 5 English and 1 French.

ASSOCIATION:

Nauchno-issledovatel skiy institut shinnoy promyshlennosti (Research Institute for the Tyre Industry)

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## "APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203830002-3

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Tanjinglid, V.L., Jarberov, i.e.; Epsitern, V.C., Uzhan, Aviv, Parzev, A.E., iogunlavkily, J.E., Estern, V.C., Est	why the transfer and 2-settly 1-7-thyly pridite, increase the bond strungth between the kniber and the cord by 80 to 100% (Bef 5 - 8). The copolyment and the cord by 80 to 100% (Bef 5 - 8). The copolyment antique of bursdiene and 2-settly 1-5-withyly indian was investigated and the obtained laboura ware evaluated as imprograting agents. Between copolyments and an indian both tests and so of superbrick facts were used seal affairs and "suitano" was added as stabiliser. Pressium parallable was used as polymerisation intrate, and 0.01 to 0.005 weight/volume of Trilca B when the	process was carried out at 50°C (isopropylbrizene by dro- peroide was used when the copolymetriation proceeds at 50°C), Furthermore 0.000% subthi-period proceeds at the first the addition of the influtor. Results in fable 1 indicate that the addition of the influtor of any sfort the interestion was relation. The rection was allowed to proceed (at both process teacherlures) until a 75 to Ac conversion was reached after 8 to 12 hours(lignre 1). The unreacted monomers was repressed from the larges to rectual distillation and 2°C of Secure D sided to the (Addispopyl zanthogen distillation) of Diprozid the copolypyl zanthogen distillation of Diprozid the copolypyl zanthogen distillation of Diprozid the copolypyl santhogen distillation of Diprozid the copolypyl supposition of Diprozid latex where good methanical proparties. The latex was thickness used for impregnating viscose and polymand, cords	in conjunction with rubbars based on natural, but all the quantity of 2-setty1-5-trainty1-craims (RES-501M) rubber.  the datax affects the bond strongth between the viscos- cord and the rubbers (Rights ?). Optimum strungth of the bond is achieved when resorcinol formalebyde resuns and and and the rubbers (Rights *). Improved pivit on and and and the copyman (Figure 4). Improved pivit on and and and the copyman (Figure 4). Improved pivit on and and and the properties of the adhesive films result when 105 by weight of 2-weight of build person the formalabyte resins on the strongth of bonding between the cord and the rubber was investigated (Rightse 5-s, n and 8). Changes in the plasticity of the polymer file the physical and sectionical properties of the adhesive file and the bonding between the cord and the rubbers. The physical and sectionical properties of the adhesive are laproved and the strongth of benching is increased then lowering the polymerisation respecture (Rable 9).	Table 4 gives the data on the strength of bonding of the viscose cond with various tyre nubbers. The strength of bonding was particularly satisfactory when natural at 500, was used and when the laterns were polymarised at 500, was used and when the laterns were polymarised at 500, maintain and 2 Soviet. Is impuring an 2 Soviet. Wessyuanyy may and 2 Soviet. Wessyuanyy may and a latern a state of the sate of the state of the sate of the
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S/138/60/000/002/007/009 A051/A029

AUTHORS:

Uzina, R.V., Basin, V.Ye.

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TITLE:

A Study of the Nature of Destruction in Cord-Adhesive-Rubber

Systems

PERIODICAL:

Kauchuk i Rezina, 1960, No. 2, pp. 28 - 35

TEXT: The authors point out two types of destruction which may occur in the cord-adhesive-rubber system: 1) lamination at the interface between cord-adhesive and adhesive-rubber, 2) destruction of the rubber, the cord and the adhesive film. The present article deals with the first type of destruction only. The work carried out by the authors in this connection was directed at selecting and perfecting a method for determining the location of the destruction and at the study of the interface lines between adhesive-cord and adhesive-rubber, using the usual methods. The types of rubber, impregnation compositions and the cords used are listed in Table 1. The method applied is fully outlined, whereby the luminescence analysis method, described in References 1 - 3, was utilized. Cross-sections of the

S/138/60/000/002/007/009 A051/A029

A Study of the Nature of Destruction in Cord-Adhesive-Rubber Systems

of penetration of the rubber into the tissue. A number of microphotographs are submitted. Each interface is discussed individually and supplemented with the microphotographs taken. The adhesive film is also discussed. It was established that no destruction takes place along the cord-adhesive interface in the system cord-adhesive rubber. It was shown that the main forms of lamination which take place in the cord-adhesive-rubber system are: a) the cohesive type: along the adhesive film layer, b) the mixed type: with part of the adhesive migrating onto the rubber and part of the rubber migrating to the cord, c) the adhesive type: along the interface adhesive--rubber. Therefore, the interface between the adhesive and the rubber and also the adhesive film is considered as the weak part of the system. In going over the results of the experiments; the authors state that the derived conclusions are not unexpected, since most of the work carried out for the strengthening of the rubber-cord system in the USSR was directed primarily at this weak spot, i.e., the adhesive-rubber interface. There are 8 sets of microphotographs, 5 tables and 12 Soviet references.

S/190/60/002/010/006/026 B004/B054

AUTHORS:

Basin, V. Ye., Shvarts, A. G.

TITLE:

Determination of the Density of Cohesion Energy of Some

Synthetic Rubbers

PERIODICAL:

Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 10,

pp. 1470-1474

TEXT: The authors determined the density of cohesion energy of the following rubber types (Table 1): 1) Divinyl styrene rubbers of the types CKCJOA (SKS-30A, 25.4% of styrene) and  $CKC-30MX\Pi$  (SKS-30ShKhP, 28% of styrene); 2) divinyl methyl vinyl pyridine rubbers of the types  $CKMB\Pi-5mp$  (SKMVP-5tr, 21% of styrene and 3.5% of 2-methyl-5-vinyl pyridine) and  $CKMB\Pi-15A$  (SKMVP-15A, 12.5% of 2-methyl-5-vinyl pyridine); 3) carboxyl-containing rubbers: types CKMI-1 (SKD-1, 1.5% of methacrylic acid) and CKC-30-1 (SKS-30-1, 28% of styrene and 1.25% of methacrylic acid). The composition of the rulcanizates is given in Table 2. Rubber samples were swelled in paraffin oil, and their elongation measured as a function of stress (50-2CO g). R. Rivlin's (Ref. 2) equation is written down:  $\Phi = 0.5 \cdot f \cdot A^{-1} \cdot v_2^{1/3} (\lambda - \lambda^{-2})^{-1}$  (1), where f is the load, A the cross Card 1/3

Determination of the Density of Cohesion Energy S/190/60/002/010/006/026 of Some Synthetic Rubbers B004/B054

section of the non-swelled sample,  $v_2$  the volume fraction of the rubber in the swelled vulcanizate. The number of cross links in the vulcanizate is determined from this function:  $\Phi = c_1 + \lambda^{-1} \cdot c_2 = 0.5 \cdot q_r \cdot M_c^{-1} \cdot RT$  (2);  $q_r$  is the rubber density,  $m_r$  the molecular weight of the chain between the space lattice points,  $c_1$ ,  $c_2$  are constants.  $c_1$  is determined by graphic extrapolation of this function for  $\lambda = 0$ :  $c_1 = 0.5 c_r RTM_c^{-1}$  (3). The values for  $v_2$ ,  $c_1$ ,  $c_2$ , and  $m_r$  are given in Table 3. The swelling equilibrium  $q_r$  and the parameter  $q_r$  were determined according to  $q_r$ . Flory (Ref. 4) (Table 4); the solubility parameter  $q_r$  was represented as a function of  $q_r$  (Fig.), where  $q_r$  is the molar volume of the solvent. The densities of cohesion energy of the rubbers mentioned, as well as of the formerly studied types  $q_r$  (NK),  $q_r$  (SKI), and  $q_r$  and  $q_r$  are given in Table 5. They lie between 68 and 75 cal/cm<sup>2</sup>. An introduction of 2-methyl-5-vinyl pyridine groups increases the oil resistance of the rubber, as well as the vulcanization with polychloro compounds (benzotrichloride). An introduction of carboxyl groups increases the cohesion energy, but it has, like metal oxides, little effect on the interaction between rubber

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and solvent. V. A. Grigorovskaya assisted in the experiments. There are 1 figure, 5 tables, and 5 references: 2 Soviet, 1 3S, and 2 British.

ASSOCIATION:

Nauchno-issledovatel'skiy institut shinnoy promyshlennosti

(Scientific Research Institute of the Tire Industry)

SUBMITTED:

March 30, 1960

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## Effect of the compatibility of adhesive polymers with casing rubber on the adhesive strength of rubber-cord systems. Kauch.i res. 21 no.9:12-17 S '62. (MIRA 15:11) 1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti. (Adhesion) (Polymers) (Tire fabrics)

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203830002-3

